

### **REMARKS**

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Please note that claims 1, 2, 5-10, 24, 25 and 28-48 are pending in the application. The Office Action Summary page is incorrect as it states claims 1, 2, 6-10, 24, 25 and 28-48 are pending in the application.

Claims 1 and 24 have been amended to recite a "population of labeled oligonucleotide probes comprising different labeled oligonucleotide probes, each labeled oligonucleotide probe comprising an oligonucleotide having n bases associated with a tag comprising a series of detectably distinguishable signal molecules, a total number of the labeled oligonucleotide probes in the population being greater than a total number of the detectably distinguishable signal molecules in the population, wherein a first detectably distinguishable signal molecule is used to encode the base information for the first nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, a second detectably distinguishable signal molecule is used to encode the base information for the second nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, and so on until an  $n^{\text{th}}$  detectably distinguishable signal molecule is used to encode the base information for the  $n^{\text{th}}$  nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, wherein the number of the detectably distinguishable signal molecules at each position in the tag indicates the type of the nucleotide in each position of the oligonucleotide of said each labeled oligonucleotide probe."

The amendments to claims 1 and 24 are supported as follows: paragraph [0033], supports "an oligonucleotide having n bases associated with a tag comprising a series of detectably distinguishable signal molecules;" original claim 1, supports "a total number of the labeled oligonucleotide probes in the population being greater than a total number of the detectably distinguishable signal molecules in the population;" and paragraph [00158], supports that "wherein a first detectably distinguishable signal molecule is used to encode the base information for the first nucleotide of the

oligonucleotide of said each labeled oligonucleotide probe, a second detectably distinguishable signal molecule is used to encode the base information for the second nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, and so on until an  $n^{\text{th}}$  detectably distinguishable signal molecule is used to encode the base information for the  $n^{\text{th}}$  nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, wherein the number of the detectably distinguishable signal molecules at each position in the tag indicates the type of the nucleotide in each position of the oligonucleotide of said each labeled oligonucleotide probe.”

No new matter has been added.

Claim Rejections - 35 USC § 112

Claims 1-2, 5-10, 24-25, 28-48 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

This rejection is respectfully traversed and should be withdrawn as claims 1 and 24 no longer recite “the unique signal molecules.”

Claim Rejections - 35 USC § 102

Claims 1-2, 5, 7-9, 24-25, 28, 31, 32, and 33, 35, 36, 41, 42, 46, 47 were rejected under 35 U.S.C. §102(b) as being anticipated by Cronin et al (US patent 6,045,996, issued April 4, 2000).

Claim 1, 2, 5-10, 24, 25, 28-38 were rejected under 35 U.S.C. §102(b) as being anticipated by Han et al (Nature Biotechnology (2001 ) volume 19, pages 631 -635).

These rejections are respectfully traversed.

Cronin teaches that “[t]he target can be labelled at one or nucleotides during or after amplification.” See column 6, lines 12-13, of Cronin.

Han states that “[t]o demonstrate the use of Qd-tagged beads for biological assays, we designed a model DNA hybridization system using oligonucleotide probes

and triple-color encoded beads, as shown in Figure 5." See page 634, right column, lines 1-4, of Han. Figure 5 of Han shows that the QD-tagged beads are attached to the end of each oligonucleotide probe. However, neither Cronin nor Han disclose "wherein a first detectably distinguishable signal molecule is used to encode the base information for the first nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, a second detectably distinguishable signal molecule is used to encode the base information for the second nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, and so on until an  $n^{\text{th}}$  detectably distinguishable signal molecule is used to encode the base information for the  $n^{\text{th}}$  nucleotide of the oligonucleotide of said each labeled oligonucleotide probe, wherein the number of the detectably distinguishable signal molecules at each position in the tag indicates the type of the nucleotide in each position of the oligonucleotide of said each labeled oligonucleotide probe."

Thus, the anticipation rejections over Cronin or Han should be withdrawn.

### CONCLUSION

In view of the above amendment, applicant believes the pending application is in condition for allowance.

The Director is authorized to charge any fees necessary and/or credit any overpayments to Deposit Account No. 03-3975, referencing Docket No. 043395-0377942.

Respectfully submitted,

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